

13. The system as recited in claim 12 wherein said platen includes a surface with a plurality of vacuum grooves formed therein, with a first subgroup of said plurality of vacuum grooves extending along said a first direction and a second subgroup of said plurality of vacuum grooves extending along said second direction, with strips associated with said first subset being disposed between adjacent vacuum grooves associated with said first subgroup and strips associated with said second subset being disposed between adjacent vacuum grooves associated with said second subgroup.

14. The system as recited in claim 11 wherein said platen includes a surface, lying in a plane, with a recess form into said surface, with said illumination source being disposed within said recess and further including an optically transmissive body, having opposed sides, disposed in said recess with one of said opposed sides resting against said illumination source, with the remaining side lying in said plane.

15. The system as recited in claim 11 wherein said illumination source includes a strip of electroluminescent material having opposed sides and said platen includes a surface, lying in a plane, with a recess form into said surface and having a nadir, with said strip being disposed in said recess with one of said opposed sides resting against said nadir, with the remaining side lying in a plane in which said surface lies.

16. The system as recited in claim 11 wherein said platen is formed from a body of glass having first and second opposed surfaces, with said illumination source being disposed adjacent to said first surface, with said second surface having a plurality of vacuum grooves formed therein and disposed between said first surface and said detection system.

17. The system as recited in claim 16 wherein said first opposed surface has an area associated therewith, with said illumination source consisting essentially of electroluminescent material completely covering said area.

18. The system as recited in claim 11 wherein said illumination source is from a group of consisting essentially of electroluminescent material, light emitting diodes and laser emitters.

19. The system as recited in claim 14 wherein said body comprises a projection lens.

20. The system as recited in claim 11 further including a top-down-dark-field illumination system in optical communication with said platen.

21. The system as recited in claim 11 further including a top-down-bright-field illumination system in optical communication with said platen.

22. A system for determining an alignment of a workpiece with respect to a tool, said workpiece of the type having a fiducial, said system comprising:

an illumination subsystem in optical communication with said workpiece;

a detection subsystem in optical communication with said workpiece, with said workpiece being disposed

between said detector and said illumination system, said fiducial extending between opposed sides of said workpiece; and

a displacement mechanism including a platen, with said illumination system being coupled to said platen and including electroluminescent material disposed so that said fiducial superimposes a sub-portion of said electroluminescent material, with said detection system being in optical communication with said displacement system.

23. The system as recited in claim 22 wherein said electroluminescent material includes a plurality of strips extending along said platen, with a first subset of said plurality of strips extending along a first direction and a second subset of said plurality of strips extending along a second direction, transverse to said first direction.

24. The system as recited in claim 23 wherein said platen includes a surface with a plurality of vacuum grooves formed therein, with a first subgroup of said plurality of vacuum grooves extending along said first direction and a second subgroup of said plurality of vacuum grooves extending along said second direction, with strips associated with said first subset being disposed between adjacent vacuum grooves associated with said first subgroup and strips associated with said second subset being disposed between adjacent vacuum grooves associated with said second subgroup.

25. The system as recited in claim 24 wherein said surface, lies in a plane, and includes a plurality of recesses, each of which includes one of said plurality of strips, and further including a plurality of bodies of glass, each of which has opposed sides and is disposed in one of said plurality of recesses with one of said opposed sides resting against said electroluminescent material and the remaining side lying in said plane.

26. The system as recited in claim 25 further including a memory and a processor, said processor being in data communication with said illumination, detection and displacement systems and said memory, with said memory having a computer-readable program embodied therein, said computer-readable program including a first set of instructions to control the illumination system to pass said electromagnetic energy through said fiducial, and a second set of instruction to control said detection system to ascertain a circumference of said emergent flux, and a third set of instructions operated on by said processor to determine said alignment as a function of said circumference.

27. The system as recited in claim 26 wherein said second set of instructions further includes a first subroutine operated on by said processor to sense an irradiance associated with said circumference with a detector, and said third set of instructions further includes a second subroutine to determine said alignment further includes determining said alignment as a function of said irradiance.

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